Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for energy management in a robotic device, ~~the robotic device comprising at least one energy storage unity and a single detector,~~ the method comprising the steps of:

providing a robotic device comprising at least one energy storage unit and a signal detector;

providing a base station for mating with the robotic device, the base station emitting a homing signal ~~comprising a plurality of signal emitters including a first signal emitter and a second signal emitter~~;

determining whether a quantity of energy stored in the energy storage unit~~, the quantity characterized at least by~~ is below one or both of a predetermined high energy level and a predetermined low energy level that is lower than the predetermined high energy level;

performing, by the robotic device, a predetermined task based at least in part on whether the quantity of energy stored~~; and~~

~~returning the robotic device to the base station when the quantity of energy stored is less than the low energy level, and wherein the predetermined task comprises a reduction in energy use by the robotic device~~ is below the predetermined high energy level or the predetermined low energy level; the predetermined task comprising:

cleaning without seeking the homing signal when the quantity of energy is not below the high energy level;

cleaning while seeking the homing signal when the quantity of energy is below the high energy level;

seeking the homing signal without cleaning when the quantity of energy is below the low energy level; and

following the homing signal to return to the recharging base station when detecting the homing signal during seeking the homing signal.

2. (Currently Amended) The method of claim 1 wherein the step of determining ~~a quantity of energy stored~~ comprises using coulometry.

3. (Currently Amended) The method of claim 1 wherein the step of determining ~~a quantity of energy stored~~ comprises setting a time period.

4. (Currently Amended) The method of claim 1 ~~wherein~~ further comprising while cleaning without seeking the homing signal, ~~the step of performing the predetermined task occurs when the quantity of energy stored exceeds the high energy level, the predetermined task comprising movement of the robotic device~~ driving away from the base station in response to ~~reception, by the signal detector, of~~ detecting a base station avoidance signal.

5. (Currently Amended) The method of claim 1 further comprising while seeking the homing signal without cleaning, ~~wherein the step of~~ returning ~~the robotic device~~ to the base station ~~further comprises~~ in response to ~~reception, by the signal detector, of~~ detecting a base station homing signal.

6. (Currently Amended) The method of claim ~~5 wherein the step of returning the robotic device to the base station occurs when the quantity of energy stored is less than the high energy level.~~ 1, further comprising orienting the robotic device in relation to (i) a right signal

transmitted by a right signal emitter of the base station and (ii) a left signal transmitted by a left signal emitter of the base station, according to signals received by an omni-directional sensor on the robotic device; and

maintaining an orientation of the robotic device by:

when the right signal is received by the omni-directional sensor on the robotic device, moving the robotic device to keep the right signal to the right of the robot, and

when the left signal is received by the omni-directional sensor on the robotic device, moving the robotic device to keep the left signal to the left of the robot.

7. (Cancelled)

8. (Currently Amended) The method of claim ~~1~~5 wherein seeking the homing signal without cleaning ~~the predetermined task~~ further includes ~~comprises~~ altering a travel mode to follow a wall ~~characteristic of the robotic device~~.

9. (Currently Amended) The method of claim 5 further comprising ~~the step of~~ charging the robotic device.

10. (Original) The method of claim 9 further comprising the step of resuming the predetermined task.

11. (Withdrawn) A method of docking a robotic device with a base station comprising a plurality of signal emitters including a first signal emitter and a second signal emitter, the method comprising the steps of:

orienting the robotic device in relation to (i) a right signal transmitted by the signal emitter and (ii) a left signal transmitted by the left signal emitter,; and

maintaining an orientation of the robotic device

and

relative to both the right signal and the left signal as the robotic device approaches the base station.

12. (Withdrawn) The method of claim 11 further comprising the steps of: detecting, by the robotic device, an overlap between the right signal and the left signal;

following, by the robotic device, a path defined at least in part by the signal overlap; and

docking the robotic device with the base station.

13. (Withdrawn) The method of claim 12 wherein the step of following the path defined at least in part by the signal overlap comprises reducing velocity of the robotic device.

14. (Withdrawn) The method of claim 12 wherein the step of docking the robotic device with the base station comprises:

detecting, by the robotic device, contact with charging terminals on the base station; and

stopping movement of the robotic device.

15. (Withdrawn) The method of claim 14 further comprising the step of charging the robotic device.

16. (Withdrawn) The method of claim 15 wherein the step of charging the robotic device comprises a plurality of charging levels.

17. (Previously Presented) An autonomous system ~~comprising a base station~~ comprising:

a base station having a charging terminal ~~terminals~~ for contacting an external terminal of a robotic device~~; a first~~, an omni-directional signal emitter for transmitting an omni-directional signal ~~a base station avoidance signal;~~ and a ~~second~~ directional signal emitter for transmitting a directional signal; and

a robotic device including a microprocessor configured to implement an avoidance behavior that measures the robotic device's energy level and instructs the robotic device to:

avoid the omni-directional signal and follow the directional signal when the measured energy level is above a predetermined energy level, and

seek the omni-directional signal when the measured energy level is below a predetermined energy level in order to dock with the base station for charging.

18-22. (Cancelled)

23. (Currently Amended) The autonomous system of claim 17 wherein at least one of the first signal emitter and the second signal emitter is configured to transmit at least one optical signal

24-25. (Cancelled)

26. (Withdrawn) A method of charging a battery of a device, the method comprising the steps of:

providing a non-charging energy to charging terminals of a charger;

confirming a presence of the device across the charging terminals by recognizing a load formed by a circuit in the charger combined with a complimentary circuit in the device; and

increasing energy to the charging terminals to a charging current to charge the battery.

27. (Withdrawn) The method according to claim 26, further comprising the steps of:

determining a level of charge in the device; and

permitting charging of the battery in the device when the level of charge is below a predetermined threshold.

28. (Withdrawn) A system for charging a mobile device, the system comprising:

a stationary charger comprising a plurality of first charging terminals;

circuitry for confirming a presence of the device across the charging terminals by recognizing a load formed by a circuit in the charger combined with a complimentary circuit in the device; and

a mobile device comprising:

a battery; and

a plurality of second charging terminals adapted to mate with the first charging terminals.

29. (Withdrawn) The system of claim 28, wherein the circuitry determines a level of charge in the battery and controls an power level provided to the first charging terminals.

30. (Withdrawn) The system of claim 29 wherein the circuitry changes from a non-charging energy to a charging current provided to the first charging terminals upon measuring a predetermined voltage across the first charging terminals when mated with the second charging terminal.

31. (Cancelled)

32. (Previously Presented) The method of claim 26, wherein the device comprises an autonomous mobile device.

33. (New) The method of claim 1 further comprising while seeking the homing signal without cleaning, reducing energy use by removing power from some of the robotic device's powered systems.

34. (New) An autonomous robot system comprising:

a base station emitting a homing signal, and

a robot dockable to the base station;

wherein the robot is configured to compare a quantity of energy in an energy storage unit to a predetermined first level or a predetermined second level that is lower than the predetermined first level to perform:

cleaning without seeking the homing signal when the quantity of energy is above the predetermined first level;

cleaning while seeking the homing signal when the quantity of energy is below the predetermined first level;

seeking the homing signal without cleaning when the quantity of energy is below the predetermined second level; and

following the homing signal to the recharging base station when detecting the homing signal during seeking the homing signal.

35. (New) The system of claim 34, wherein the robot is configured to determine the quantity of energy in the energy storage unit using at least one of coulomtery and monitoring of a time period of use.

36. (New) The system of claim 34, wherein the robot is configured to drive away from the base station in response to detecting an avoidance signal from the base station while cleaning without seeking the homing signal.

37. (New) The system of claim 34, wherein the robot is configured to reduce energy use by removing power from some of the robotic device's powered systems while seeking the homing signal without cleaning.

38. (New) The system of claim 34, wherein the robot is configured to follow a wall while seeking the homing signal without cleaning.

39. (New) The system of claim 34, wherein the robot further comprises an omni-directional sensor and the base station further comprises a right signal emitter and a left signal emitter for transmitting corresponding right and left signals; and

wherein the robot is configured to maintain an orientation by:

moving to keep the right signal to the right of the robot when the right signal is received by the omni-directional sensor, and

moving to keep the left signal to the left of the robot when the left signal is received by the omni-directional sensor.

40. (New) The system of claim 34, wherein the base station further comprises:

a plurality of first charging terminals; and

circuitry for confirming a presence of the robot at the charging terminals by recognizing a load formed by a circuit in the base station combined with a complementary circuit in the robot; and

wherein the robot further comprises:

a battery; and

a plurality of second charging terminals adapted to mate with the first charging terminals.

41. (New) The system of claim 40, wherein the circuitry of the base station is configured to increase energy to the charging terminals to a charging current upon confirmation of a presence of a robotic device docked with the base station.